

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- Claim 1      (Currently amended)      A method of product development and commercialization comprising:
- (a) determining customer requirements for a chemical product;
  - (b) determining the return on investment of developing said chemical product per said customer requirements;
  - (c) setting final requirements;
  - (d) approving said final requirements;
  - (e) selecting a base technology;
  - (f) modifying said base technology to meet said final requirements;
  - (g) approving said base technology selection and said modifications;
  - (h) testing said modified base technology to verify it meets said final requirements;
  - (i) approving said testing of said modified base technology;

- (j) checking compliance with at least a portion of the relevant health and safety laws and regulations of at least a portion of the jurisdictions where the modified base technology will be made, transported, or sold; performing any required compliance tests, and electronically providing the results of any required tests to a government agency in the format approved by the government agency;
- (k) approving said assurance of compliance; and
- (l) manufacturing/commercializing said modified base technology;
- (m) storing all data entered, retrieved, processed, created, stored, or modified in one or more central or distributed mutually accessible computer readable databases; and
- (n) sending an electronic mail notification to a participant in the method or an interested person upon completion of at least one of the steps of the method; wherein the electronic mail notification is controlled by a software code portion listener module which listens for completion of a step being stored in the database, and upon such occurrence of the completion being stored, the listener module passes an instruction to an email application to send an pre-determined message to a participant;
- (o) immediately prior to each approval step (d), (g), (i), or (k) above, locking portions of the database sufficient to prevent continuation of the process without completing the

respective approval step and unlocking the locked portions  
of the database after the respective approval step is  
completed.

- Claim 2 (Canceled).
- Claim 3 (Original) The method of claim 1 further comprising sending an electronic mail notification to a participant in the method or an interested person upon completion of one of the steps of the method.
- Claim 4 (Original) The method of claim 2, wherein all participants in the method and authorized persons may access at least a portion of said database.
- Claim 5 (Original) The method of claim 4, wherein said access includes a plurality of pre-defined views, thereby permitting quick information sorting.
- Claim 6 (Original) The method of claim 4, wherein said access to said database is available globally from any personal computer having installed thereon a client application configured to perform database management system functions with said database and having a network connection configured to allow communication between said client application and said database.
- Claim 7 (Original) The method of claim 1, wherein the steps are performed sequentially such that a later step is not performed until all earlier steps are completed.

- Claim 8 (Original) The method of claim 7, further comprising locking at least a portion of said steps prior to the completion of all earlier steps and unlocking said steps upon completion of all earlier steps, thereby preventing entering a step out of order without authorization.
- Claim 9 (Original) The method of claim 1, further comprising locking at least a portion of said steps after their completion, thereby preventing revision of said steps without authorization.
- Claim 10 (Original) The method of claim 1, further comprising terminating the method at any step, wherein said termination prevents further revision of any step in the method.
- Claim 11 (Original) The method of claim 1 further comprising a step to maintain version control of said approved final requirements in step (d), said approved base technology selection and modifications in step (g), or said approved qualification of modified base technology in step (i).
- Claim 12 (Canceled).
- Claim 13 (Original) The method of claim 1, further comprising recording in said database action items for completing one or more steps of the method, electronically notifying the responsible persons of said actions items, and tracking completion of said action items.
- Claim 14 (Original) The method of claim 1, wherein one or more of said steps is at least in part completed by selecting items from a menu, list box, drop down list, or other selection device available in a

personal computer graphical user interface, thereby reducing typing time and errors.

Claim 15 (Original) The method of claim 1, further comprising plotting the actual versus planned progress of said steps on a timeline, for measuring and improving performance and productivity of practicing said method.

Claim 16 (Currently Amended) A method of product development and commercialization comprising:

- (a) determining customer requirements for a chemical product;
- (b) storing said requirements in a computer readable database;
- (c) determining the return on investment of developing said chemical product per said customer requirements;
- (d) storing said return on investment in said computer readable database;
- (e) setting final requirements;
- (f) storing said final requirements in said computer readable database;
- (g) locking at least a portion of the computer readable database sufficient to prevent continuation of later steps without approval of prior steps;
- (h) approving said final requirements;

- (i) unlocking the portion of the computer readable database locked in step (g);
- (j) storing said approval in said computer readable database;
- (k) selecting a base technology;
- (l) storing said selection in said computer readable database;
- (m) modifying said base technology to meet said final requirements;
- (n) storing information of said modification in said computer readable database;
- (o) locking at least a portion of the computer readable database sufficient to prevent continuation of later steps without approval of prior steps;
- (p) approving said base technology selection and said modifications;
- (q) unlocking the portion of the computer readable database locked in step (o);
- (r) storing said approval in said computer readable database;
- (s) testing said modified base technology to verify it meets said final requirements;

- (t) storing information from said testing in said computer readable database;
- (u) locking at least a portion of the computer readable database sufficient to prevent continuation of later steps without approval of prior steps;
- (v) approving said testing of said modified base technology;
- (w) unlocking the portion of the computer readable database locked in step (u);
- (x) storing said approval in said computer readable database;
- (y) checking compliance with at least a portion of the relevant health and safety laws and regulations of at least a portion of the jurisdictions where the modified base technology will be made, transported, or sold;
- (z) approving said checking of compliance;
- (aa) storing said approval in said computer readable database;  
and
- (bb) commercializing said modified base technology; and
- (cc) approving said commercialization and thereby locking all steps of said method, thereby preventing any further revision of said steps

(dd) sending an electronic mail notification to a participant in the method or an interested person upon completion of at least one of the steps of the method; wherein the electronic mail notification is controlled by a software code portion listener module which listens for completion of a step being stored in the database, and upon such occurrence of the completion being stored, the listener module passes an instruction to an email application to send a pre-determined message to a participant.

Claim 17 (Original) The method of claim 16, further comprising storing all data entered, retrieved, processed, created, stored, or modified in one or more central or distributed mutually accessible databases.

Claim 18 (Original) The method of claim 16, wherein said access to said database is available globally from any personal computer having suitable client software installed and suitable network connectivity.

Claim 19 (Original) The method of claim 16, wherein all participants in the method and authorized persons may access at least a portion of said database, and the graphical user interface presented matches the person's type of database access.

Claim 20 (Original) The method of claim 16, wherein said access includes a plurality of pre-defined views, thereby permitting quick information sorting and searching.

Claim 21 (Original) The method of claim 16, wherein the steps are performed sequentially such that a later step is not performed until all earlier steps are completed.



- Claim 22 (Original) The method of claim 21, further comprising locking at least a portion of said steps prior to the completion of all earlier steps and unlocking said steps upon completion of all earlier steps, thereby preventing entering a step out of order without authorization.
- Claim 23 (Original) The method of claim 16, further comprising locking at least a portion of said steps after their completion, thereby preventing revision of said steps without authorization.
- Claim 24 (Original) The method of claim 16, further comprising maintaining version control of approved final requirements, approved base technology selection and modifications, or approved qualification of modified base technology.
- Claim 25 (Original) The method of claim 16, further comprising terminating the method at any step, wherein said termination prevents further revision of any step in the method.
- Claim 26 (Original) The method of claim 16, further comprising during any step sending an electronic mail notification to a participant in the method or an interested person.
- Claim 27 (Original) The method of claim 16, further comprising automatically sending e-mail notification to participants when any approval step is performed.
- Claim 28 (Original) The method of claim 16, further comprising recording in said database action items for completing one or more steps of

the method, electronically notifying the responsible persons of said actions items, and tracking completion of said action items.

- Claim 29 (Original) The method of claim 16, further comprising preventing said approval step (t) from being performed while any action items are incomplete.
- Claim 30 (Original) The method of claim 29, wherein upon a termination of an instance of said method having incomplete action items results in sending an automatic electronic mail notification of said termination and the respective incomplete action item to each respective participant responsible for each respective incomplete action item.
- Claim 31 (Original) The method of claim 16, wherein one or more of said steps is at least in part completed by selecting items from a menu, list box, drop down list, or other selection device available in a personal computer graphical user interface, thereby reducing typing time and errors.
- Claim 32 (Original) The method of claim 16, wherein database users can enter new items in menus, list boxes, drop down lists or other selection devices after which these new items become part of the selection lists for instances of said method.
- Claim 33 (Original) The method of claim 16, wherein at least a portion of said steps comprise copying template forms that are stored in the database thereby insuring data consistency,

- Claim 34 (Original) The method of claim 33, wherein said template forms are revisable at any time by authorized administrators and wherein upon said revision the template forms become immediately available for use by future instances of said method.
- Claim 35 (Original) The method of claim 16, wherein reference forms are stored in the database and are made available to users thereby providing assistance in completing said steps.
- Claim 36 (Original) The method of claim 35, wherein said reference forms are revisable at any time by authorized administrators and wherein upon said revision the reference forms become immediately available for use by future instances of said method.
- Claim 37 (Original) The method of claim 16, wherein administration of the database comprises providing, changing or revoking user access, maintaining items in various selection lists, maintaining template forms, reference forms and help forms, and wherein said administration is performed only by authorized persons
- Claim 38 (Original) The method of claim 37, further comprising performing said administration in a graphical user interface and wherein said administration does not require knowledge of computing languages.
- Claim 39 (Currently amended) A method of product development comprising:
- (a) determining customer requirements for a chemical product;

- (b) storing said requirements in a computer readable database;
- (c) evaluating economics of developing said chemical product per said customer requirements;
- (d) storing said evaluation in said computer readable database;
- (e) selecting a base technology;
- (f) storing said selection in said computer readable database;
- (g) determining modifications needed of said base technology to meet said final requirements, thereby resulting in a modified base technology;
- (h) storing information of said ~~determination~~ modified base technology in said computer readable database; and
- (i) testing said ~~determination~~ modified base technology to verify it meets said final requirements; and
- (j) storing details and results of said testing in said computer readable database[.];

- (k) checking compliance with at least a portion of the relevant health and safety laws and regulations of at least a portion of the jurisdictions where the modified base technology will be made, transported, or sold;
- (l) locking at least a portion of the computer readable database sufficient to prevent continuation of later steps without approval of the checking compliance step (k);
- (m) approving said checking of compliance; and
- (n) unlocking the portion of the computer readable database locked in step (l);
- (o) storing said approval in said computer readable database
- (p) sending an electronic mail notification to a participant in the method or an interested person upon completion of at least one of the steps of the method; wherein the electronic mail notification is controlled by a software code portion listener module which listens for completion of a step being stored in the database, and upon such occurrence of the completion being stored, the listener module passes an instruction to an email application to

send an pre-determined message to a  
participant.

- Claim 40 (Original) The method of claim 39, further comprising after said storing step (j), a step for commercializing said modifying base technology.
- Claim 41 (Original) The method of claim 39, further comprising storing all data entered, retrieved, processed, created, stored, or modified in one or more central or distributed databases.
- Claim 42 (Original) The method of claim 39, wherein access to said database is available globally from any personal computer having suitable client software installed and suitable network connectivity.
- Claim 43 (Original) The method of claim 39, wherein all participants in the method and authorized persons may access at least a portion of said database, and the graphical user interface presented matches the person's type of database access.
- Claim 44 (Original) The method of claim 39, wherein said access includes a plurality of pre-defined views.
- Claim 45 (Original) The method of claim 39, wherein the steps are performed in sequentially such that a later step is not performed until all earlier steps are completed.
- Claim 46 (Original) The method of claim 45, further comprising locking at least a portion of said steps prior to the completion of all earlier steps and unlocking said steps upon completion of all earlier steps,

thereby preventing entering a step out of order without authorization.

- Claim 47 (Original) The method of claim 39, further comprising locking at least a portion of said steps after their completion, thereby preventing revision of said steps without authorization.
- Claim 48 (Original) The method of claim 39, further comprising terminating the method at any step, wherein said termination prevents further revision of any step in the method.
- Claim 49 (original) The method of claim 39, further comprising during any step sending an electronic mail notification to a participant in the method or an interested person.
- Claim 50 (original) The method of claim 39, further comprising automatically sending e-mail notification to participants when any approval step is performed.
- Claim 51 (original) The method of claim 39, further comprising recording in said database action items for completing one or more steps of the method, electronically notifying the responsible persons of said actions items, and tracking completion of said action items.
- Claim 52 (original) The method of claim 39, further comprising preventing said approval step (t) from being performed while any action items are incomplete.
- Claim 53 (original) The method of claim 39, wherein upon a termination of an instance of said method having incomplete action items

results in sending an automatic electronic mail notification of said termination and the respective incomplete action item to each respective participant responsible for each respective incomplete action item.

Claim 54 (original) The method of claim 39, wherein administration of the database comprises providing, changing or revoking user access, maintaining items in various selection lists, maintaining template forms, reference forms and help forms, and wherein said administration is performed only by authorized persons

Claim 55 (original) The method of claim 54, further comprising performing said administration in a graphical user interface and wherein said administration does not require knowledge of computing languages.

Claim 56 (currently amended) A method of product development comprising:

- (a) determining customer requirements for a chemical product;
- (b) storing said requirements in a computer readable database;
- (c) determining if base technology modifications are needed to meet said customer requirements;
- (d) if base technology modifications are needed to meet said customer requirements, then said method further comprises:



- (1) selecting a base technology;
- (2) storing said selection in said computer readable database;
- (3) determining modifications needed of said base technology to meet said final requirements, thereby resulting in a modified base technology;
- (4) storing information of said ~~determination~~ modified base technology in said computer readable database; and
- (5) if the cost of said modification exceeds a predetermined amount, then said method further comprises:
  - (a) evaluating economics of developing said chemical product per said customer requirements;
  - (b) storing said evaluation in said computer readable database;
  - (c) qualifying said ~~determination of modifications~~ to verify it meets said final requirements;
  - (d) storing said qualification in said computer readable database;

- (e) checking compliance with at least a portion of relevant health and safety laws and regulations of at least a portion of the jurisdictions where the modified base technology will be made, transported, or sold;
- (f) locking a portion of the computer readable database;
- (g) approving said checking of compliance; and
- (h) unlocking the portion of the computer readable database locked in sub-step (5,f);
- (i) storing said approval in said computer readable database;
- (j) sending an electronic mail notification to a participant in the method or an interested person upon completion of at least one of the steps of the method; wherein the electronic mail notification is controlled by a software code portion listener module which listens for completion of a step being stored in the database, and upon such occurrence of the completion being stored, the listener module passes an instruction to an email application to send a pre-determined message to a participant; and

(6) manufacturing/commercializing said modified base technology.

Claim 57 (Original) The method of claim 56, wherein said access to said database is available globally from any personal computer having suitable client software installed and suitable network connectivity.

Claim 58 (Original) The method of claim 56, wherein all participants in the method and authorized persons may access at least a portion of said database, and the graphical user interface presented matches the person's type of database access.

Claim 59 (Original) The method of claim 56, further comprising locking at least a portion of said steps prior to the completion of all earlier steps and unlocking said steps upon completion of all earlier steps, thereby preventing entering a step out of order without authorization.

Claim 60 (Original) The method of claim 56, further comprising during any step sending an electronic mail notification to a participant in the method or an interested person.

Claim 61 (Original) The method of claim 56, further comprising recording in said database action items for completing one or more steps of the method, electronically notifying the responsible persons of said actions items, and tracking completion of said action items.

Claim 62 (Original) The method of claim 56, wherein upon a termination of an instance of said method having incomplete action items results in sending an automatic electronic mail notification of said

termination and the respective incomplete action item to each respective participant responsible for each respective incomplete action item.

- Claim 63      (Original)      The method of claim 16, wherein one or more of said steps is at least in part completed by selecting items from a menu, list box, drop down list, or other selection device available in a personal computer graphical user interface, thereby reducing typing time and errors.
- Claim 64      (Original)      The method of claim 56, wherein administration of the database comprises providing, changing or revoking user access, maintaining items in various selection lists, maintaining template forms, reference forms and help forms, and wherein said administration is performed only by authorized persons
- Claim 65      (Original)      The method of claim 64, further comprising performing said administration in a graphical user interface and wherein said administration does not require knowledge of computing languages.
- Claim 66      (canceled).
- Claim 67      (currently amended)      A product development and commercialization management information system comprising:
- (a)    a collaborative work space, wherein multiple participants can individually and jointly work on a project:

- (1) configured at least partially automating workflow of chemical product development and commercialization projects from determining customer requirements and financial analysis of project viability, through determining a base technology, determining any needed modifications of said base technology, and testing said modified base technology to verify compliance with customer requirements, and configured for adding/changing the participants in a project;
- (2) configured for assigning, tracking and providing notification of tasks relating to a chemical product development project or group of projects;
- (3) configured for providing a collaborative work space comprising a secure/searchable communication repository linked to chemical product development projects or logical grouping of projects and their tasks, for communications with and between project participants and customers, configured for recording, channeling, and archiving said communications;
- (4) configured for financial tracking and/or forecasting for a project or a logical grouping of projects;
- (5) configured for importing lab data;
- (6) configured for providing a secure and searchable document repository linked to projects or logical

groupings of projects, wherein said documents are in final format; and

(b) a computer readable database:

- (1) configured for storing a chemical product development project's history and details, said history and details comprising the types of data, time schedules, status of all steps in the project, contact information, results of all steps in the project, and documents and information supporting all steps in the project; and
- (2) configured for searching said stored history and details and for generating reports from same;
- (3) configured for sending an electronic mail notification to pre-determined persons upon updating of the database; wherein the electronic mail notification is controlled by a software code portion listener module which listens for updating of the database, and upon such occurrence of the updating, the listener module passes an instruction to an email application to send an pre-determined message to the pre-determined persons;

(c) a computer network for connecting said collaborative workspace and computer readable database; and

(d) means for providing for different levels of secure access for different users.

Claim 68 (original) The system of claim 67, wherein said network comprises the Internet.

Claim 69 (original) The system of claim 67, wherein said collaborative workspace comprises a client application comprising a web browser.

Claim 70 (New) The method of claim 16, wherein the checking compliance step further comprises electronically providing the results of such step to a government agency in a format approved by the government agency.